1997

Achieving AECC outcomes through the seven principles for good practice in undergraduate education

Bruce M. Bradford
Fairfield University, bbradford@fairfield.edu

Milo W. Peck Jr.
Fairfield University, mpeck@fairfield.edu

This is an Accepted Manuscript of an article published in Journal of Education for Business 72, no. 6 (1997): 364-368, available online: http://www.tandfonline.com/[10.1080/08832323.1997.10116872.

Peer Reviewed

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Bruce M. Bradford*

and

Milo W. Peck, Jr.

Please do not quote.

November 1996

*Assistant Professors of Accounting, Fairfield University, Fairfield, CT 06430.

Bruce M. Bradford is the corresponding author, (203) 254-4000 ext. 2825.

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Abstract

Accounting Education Change Commission's (AECC) Position Statement No. 1 provides numerous educational outcomes which accounting educators are to achieve. However, guidance has not been provided by the accounting profession on how accounting educators could achieve those outcomes.

The American Association of Higher Education developed seven principles for good practice in undergraduate education. These principles provide guidance to accounting educators by focusing on student motivation and active learning. Experiential and cooperative learning methods are reviewed with examples applying each method to accounting classes. Both methods are found to provide a variety of classroom techniques which, in combination, fulfill the seven principles and achieve the AECC outcomes.

Achieving AECC Outcomes Through the Seven Principles

for Good Practice in Undergraduate Education

During the late 1980s, there were two parallel calls for change in higher education. On the recommendation of the Bedford Committee report (AAA, 1986), with prompting from the public accounting profession (Kullberg et al., 1989), the American Accounting Association formed the Accounting Education Change Commission (AECC). At about the same time, the American Association of Higher Education (AAHE) and the Johnson Foundation cosponsored a committee to developed a concise set of principles for improvement of educational practice based on the past 50 years of educational research (Gamson, 1991). Both committees worked independently to recommend improvements in undergraduate education.

In Proposition Statement No. 1 (AECC, 1990), the AECC calls for a focus on intellectual, communication, and interpersonal skills within an active learning framework. The recommendations suggest that a broad liberal education, with emphasis on learning how to learn, is an appropriate foundation for a professional education. The prospective accountant, as a liberally educated professional, should be able to demonstrate an "ability to locate, obtain and organize information", "identify and solve unstructured problems in unfamiliar settings", work effectively in a group environment, and demonstrate "effective reading, listening, writing, and speaking" skills (p. 307).

However, the AECC has not been forthcoming about recommending how such outcomes may be achieved. Without such guidance, many accounting educators have continued to teach as they were taught, in a lecture-problem solving style (Beegle & Coffee, 1991).

The AAHE committee made seven recommendations based on available educational research. These "seven principles of good practice in undergraduate education" are: 1) encourage student-faculty contact, 2) encourage cooperation among students, 3) encourage active learning, 4) give prompt feedback, 5) emphasize time on task, 6) communicate high expectations, and 7) respect diverse talents and ways of learning (Chickering & Gamson, 1987). The AAHE committee achieved wide dissemination of their recommendations through publication of an article describing the seven principles in the AAHE Bulletin (Chickering & Gamson, 1987). The Johnson Foundation also provided reprints of the article; over 150,000 copies were distributed to universities in the U.S., Canada, U.K., and other countries over the 18 months following publication (Gamson, 1991). The wide and rapid acceptance of the seven principles suggests that the normally placid higher educational environment is undergoing a fundamental transformation characterized by openness to new ideas and willingness to experiment.

Accounting educators should consider using the seven principles as a guide for change. Applying the seven principles would assist accounting educators in selecting appropriate teaching styles to achieve the AECC's specified educational outcomes.

Seven Principles

The seven principles for good practice in undergraduate education consist of two distinct subsets. Four principles address student motivation and performance: communication of high expectations, emphasis of time on task, prompt feedback, and encouragement of student-faculty contact. The remaining three principles advocate active learning: encouragement of cooperation, active learning, and respect for diverse talents and ways of learning.

The four principles identified as affecting motivation and performance are also closely related. According to Sorcinelli (1991), if high and attainable course goals are set, student performance should improve. If goals are set low, student performance will decline. Two major determinants of goal attainment are time on task and frequent feedback. McKeachie et al. (1986) has observed that student performance directly relates to time spent learning and the value of prompt feedback may be to increase time on task. They also suggest that the faculty member's attitude and enthusiasm may have a significant impact on student motivation. For example, positive informal contact linking academic learning with the student's professional ambitions reinforces student values, professional commitment and educational outcomes (Sorcinelli, 1991).

The research relating to student motivation and performance provides useful insight into the process of education regardless of the teaching strategy. The remaining three principles suggest that active learning may be more effective in facilitating student learning than the passive lecture-problem solving style that still predominates in accounting classrooms (see Beegle & Coffee, 1991).

The seven principles indicate that good educational practice should include active learning, encourage cooperation, and respect each student's unique talents and way of learning. Active learning involves a large number of classroom techniques or structures. Many structures involve group work which emphasizes cooperation among students. The delegation of work within groups allows members to select those learning tasks which they do best. In this way, group members contribute their unique insights and the product of their talents to the benefit of the group.

Two Methods of Active Learning with Examples

Two approaches to active learning which have gained some inroads in accounting education are experiential learning (Kolb, 1976; 1984) and cooperative learning (Cottell & Millis, 1992; 1993). Both of these methods of active learning provide insight into instructional design which facilitates choosing appropriate classroom techniques to achieve AECC's educational outcomes. Each of these two active learning methods are discussed and illustrated through the authors' classroom experiences.

Experiential Learning

Kolb (1976; 1984) proposed the experiential learning cycle (Figure 1) in which individuals reflect on experience, assign meaning by relating it to a theoretical framework, and test the robustness of the theory through application. Experiential learning also describes an individual's preferred manner of perception and processing of information. Perception is evaluated on a continuum from concrete experience to abstract conceptualization. Process is evaluated on a continuum from active experimentation to reflective observation. The combination of perception and process provides the individuals with their preferred learning style.

Kolb describes four types of learning styles: convergent, divergent, assimilative, and accommodative (Figure 1). The convergent learning style is characterized as abstract and active. Convergers are interested in the practical application of ideas. They tend to be unemotional, task oriented, have technical interests, and prefer structured problems. The divergent learning style is characterized as favoring concrete experience and reflection. Divergers tend to be imaginative, emotional, people oriented, and view experiences from many

perspectives. The assimilative learning style is characterized as abstract and reflective. Assimilators tend to do best at the generation of theories and models. They are good at inductive reasoning and value theory more than facts. The accommodative learning style is characterized as concrete and active. Accommodators are good at conducting experiments and executing plans. They tend to be practical and adapt well to unanticipated events. When a theory does not fit the facts, they will ignore the theory.

Numerous studies have attempted to characterize the learning styles of accounting students and professional accountants. In Principles of Accounting, which is generally required for all business majors, students tend to respond as assimilators (Baldwin & Reckers, 1984; Geiger, 1992). Beyond the first year, accounting majors tend to become increasingly convergent (Baldwin & Reckers, 1984; Baker et al., 1986). Among professional accountants, the convergent learning style is even more pronounced (Collins & Milliron, 1987), until senior-levels are reached. At this point, the nature of the job environment changes favoring an accommodative learning style (Wolfe & Kolb, 1979).

Baker et al. (1986) suggests the real value of this research does not come from the identification of a single dominant learning style, but is the recognition of the diversity of learning styles demonstrated by students. Their sample of accounting majors consisted of approximately 40 percent convergers, while the remaining 60 percent were distributed evenly across the other three learning styles. They recommend that a variety of teaching styles be used. This would actively involve more students by allowing each the opportunity to excel at a variety of learning tasks.

Applications of experiential learning in accounting education have primarily involved business simulations (see Borkowski & Welsh, 1996) or cases (see Campbell & Lewis, 1991;

Knechel, 1992). According to Svinicki and Dixon (1987), simulations may provide students with an initial concrete experience that will facilitate their assignment of meaning to the topic following the exercise. Both simulations and cases may also be used to provide for active experimentation which involves the application of newly learned concepts to a new situation.

To illustrate the application of experiential learning techniques to accounting, the authors' experiences with simulations and cases in several accounting courses are reviewed. In Principles of Accounting, one problem area for students is understanding the accounting cycle. While students understand each part of the cycle, they often have difficulty understanding the synthesis of those parts into an information system. Following Knechel (1989), the students are asked to participate in a business simulation by playing 52 turns of Monopoly® to simulate a business year. They are required to apply their recently obtained knowledge of the accounting cycle by journalizing and posting all appropriate business transactions for their company. This information is then used to prepare a trial balance and a full set of financial statements. The written report includes the journal, ledger, and financial statements but the emphasis is on understanding the flow of information and interpreting the company's performance and financial position.

Large cases, or mini-cases, are used at different levels in the accounting curriculum to facilitate the students application of new knowledge to the solution of unstructured problems in unfamiliar settings. The authors use this approach in Intermediate Accounting and Financial Statement Analysis. In Intermediate Accounting, groups of students are asked to solve AICPA adapted mini-cases and present the written solution for grading. Following collection of case analyses, class discussion focuses on the critical thinking aspects of each case. In Financial

Statement Analysis, each group participates in two rounds of case analysis with required written and oral presentations for each. The class is encouraged to critically examine each presentation, request explanations from the presenters, and suggest alternative solutions. In both classes, responding to the requirements of the case analysis, the students were demonstrating communication skills. In Financial Statement Analysis, structuring the class as two rounds of case analysis encourages improvement of presentation and written communication skills over the semester.

Cooperative Learning

Much of the uniqueness of the cooperative learning method is derived from its focus on structured small group environments. Small heterogeneous groups of two to five students are formed. Specific tasks, involving only part of the information set needed to complete the exercise, are assigned to each student. This fosters an interdependence of group members, cooperation, and consensus through "resolution of cognitive conflicts" and "reciprocal sense-making" (Nastasi & Clements, 1991). For those who participate in these in-class group activities, both giving and receiving help is positively related to achievement, while "off-task" or passive behavior is negatively related to achievement (Webb, 1982). To establish a successful group environment, group reward structures are necessary (Webb, 1982; Ravenscroft et al., 1995). Salvin (1983) suggests that group rewards should be based on individual learning.

According to Cottell and Millis (1993), cooperative learning groups should not be used exclusively, but rather to meet specific educational objectives. Many group activities, or learning structures, have been proposed in the literature, e.g., think-pair-share, jigsaw, discovery, structured controversy, and reciprocal peer questioning (Cottell & Millis, 1993; King, 1992).

Two learning structures of particular interest to accounting education are cooperative problem solving and in-class simulation. Qin et al. (1995) examined individuals' ability and cooperative groups' ability to solve both structured and unstructured problems. They determined that sharing insights gave advantage to group problem solving for both types of problems with the greatest advantage being for large unstructured problems.

To illustrate the application of cooperative learning techniques to accounting, the authors' experiences with cooperative problem solving and simulation in Principles of Accounting are reviewed. Cooperative problem solving is used throughout Principles of Accounting. Numerous in-class exercises have been constructed which require groups of four to solve problems associated with bank reconciliation, inventory, depreciation, financial statement analysis, and statement of cash flows. For example, in the financial statement analysis exercise, financial statements for McDonald's Corp. and Wendy's International, Inc. are distributed. Each group is assigned two ratios to calculate for one of the firms. After 10 minutes, the results from each group are written on the board and the class is asked to compare the two companies, find their strengths and weaknesses, and determine which one would be the better investment. From cooperative problem solving, the Freshman seem to gain the confidence to undertake assignments which may be intimidating for them, otherwise.

Another problem area in Principles of Accounting for students is understanding manufacturing costs. Students, generally, have no experience with the manufacturing environment and have difficulty assigning meaning to manufacturing costs. The authors use one class period for simulation of a manufacturing environment prior to the beginning of the management accounting portion of Principles of Accounting. Following Tyson (1986), the students are asked to form groups of four and manufacture quilt designs from construction paper.

Each member of the group is assigned a specific task: trace the design, cut the component parts, paste the parts into the assigned design, and keep all records of this job order costing system. The students determine the dollar amounts to be assigned to direct material, direct labor, and manufacturing overhead associated with each job. Discussion of the simulation in the classes following the exercise focuses on these manufacturing costs and the predetermined manufacturing overhead rate. Later discussions use the costs developed during the simulation to demonstrate the flow of costs through a manufacturing firm, and the reduction of sequential job costs to demonstrate the learning curve. Consistent with the observations of Borkowski and Welsh (1996), this simulation project has a positive effect on both student learning and attitude towards management accounting.

Seven Principles and AECC Outcomes

Both experiential learning and cooperative learning methods provide instructional design frameworks which will assist in developing courses which fulfill the seven principles of good practice in undergraduate education (see Millis, 1991). As recommended by Baker et al. (1986), the instructor can provide a variety of teaching styles by combining experiential and cooperative learning activities with the traditional lecture class. The instructor's choice of activity should be driven by specific educational objectives. They should identify problem areas in current course design and choose activities which address those specific issues. Detailed recommendations are available on incorporating experimental and cooperative learning activities into the accounting curriculum (Cottell & Millis, 1993; Baker et al., 1987; Svinicki & Dixon, 1987; Borkowski & Welsh, 1996).

Incorporating the seven principles, by adding active learning activities into a lecture style course, would encourage students to become more actively involved in the learning process. The variety of learning tasks provided by these activities respect the diversity of student learning styles and talents. Working with groups increases the student-faculty contact and provides the instructor with more opportunities for timely direction, encouragement of cooperation, and praise the students' efforts. Because there is limited time available for each activity, group reward structures based on individual efforts and frequent feedback from the instructor encourages the students to focus on the learning tasks.

Experiential and cooperative learning activities truly meet or exceed the AECC educational outcomes. For interpersonal skills, the AECC recommends that the prospective accountant should work effectively in a group environment. This implies the student should develop cooperation, negotiation, and consensus building skills. Coordinating group activities exceed these guidelines by providing students with leadership experience and requiring time management. For communication skills, the AECC recommends that the prospective accountant demonstrate effective reading, writing, speaking, and listening skills. The case method meets, and exceeds, these recommendations by requiring students to speak and write persuasively (see Kullberg et al., 1989). For intellectual skills, the AECC recommends that the prospective accountant be able to locate, obtain, organize information and solve large unstructured problems. Many of the cases and simulations available would provide these educational outcomes without difficulty.

Experiential learning provides individuals with skills to support life-long learning as recommended by the AECC. According to Kolb (1976; 1984), a series of learning activities can guide students through the learning cycle (Figure 1) and demonstrate how to learn from

experience. By applying the learning cycle, students can become independent learners with the skill to learn from experience throughout their lives. Furthermore, experiencing learning styles other than their preferred style allows students to develop more balanced learning styles. The more balanced and adaptive learner has greater chance for success in the modern dynamic work environment.

In conclusion, it is recommended that accounting educators adopt the seven principles as a guide when making instructional design changes in accounting courses. If they are open to new ideas and willing to experiment with active learning, accounting educators may exceed the AECC outcomes. It is possible for the accounting curriculum to be technically rigorous and provide students with communication skills, interpersonal skills, and a commitment to life-long learning.

References

American Accounting Association, Committee on the Future Structure, Content, and Scope of Accounting Education. (1986). Future accounting education: Preparing for the expanding profession. Issues in Accounting Education, 1, 168-195.

Accounting Education Change Commission. (1990). Objectives of education for accountants: Position statement number one. Issues in Accounting Education, 5, 307-312.

Baker, R. E., Simon, J. R., & Bazeli, F. P. (1986). An assessment of learning style preferences of accounting majors. Issues in Accounting Education, 1, 1-12.

Baker, R. E., Simon, J. R., & Bazeli, F. P. (1987). Selecting instructional design for introductory accounting based on the experiential learning model. Journal of Accounting Education, 5, 207-226.

Baldwin, B. A., & Reckers, P. M. J. (1984). Exploring the role of learning style research in accounting education policy. Journal of Accounting Education, 2, 63-76.

Beegle, J., & Coffee, D. (1991, Nov-Dec). Accounting instructors' perceptions of how they teach versus how they were taught. Journal of Education for Business, 67, 90-94.

Borkowski, S. C., & Welsh, M. J. (1996). 4MAT/formatting the accounting curriculum. Accounting Educators' Journal (forthcoming).

Campbell, J. E., & Lewis, W. F. (1991). Using cases in accounting classes. Issues in Accounting Education, 6, 276-283.

Chickering, A. W., & Gamson, Z. F. (1987, March). Seven principles for good practice in undergraduate education. AAHE Bulletin, pp. 3-7.

Collins, J. H., & Milliron, V. C. (1987). A measure of professional accountants' learning style. Issues in Accounting Education, 2, 193-206.

Cottell, P. G., & Millis, B. J. (1992). Cooperative learning in accounting. Journal of Accounting Education, 10, 95-111.

Cottell, P. G., & Millis, B. J. (1993). Cooperative learning structures in the instruction of accounting. Issues in Accounting Education, 8, 40-59.

Gamson, Z. F. (1991, Fall). A brief history of the seven principles for good practice in undergraduate education. New Directions for Teaching and Learning, 47, 5-12.

Geiger, M. A. (1992). Learning styles of introductory accounting students: An extension to course performance and satisfaction. Accounting Educators' Journal, 6, 22-39.

King, A. (1992). Promoting active learning and collaborative learning in business administration classes. In T. J. Frecka (Ed.), Critical thinking, interactive learning, and technology: Reaching for excellence in business education. Chicago, IL: Arthur Andersen.

Kolb, D. A. (1976, Spring). Management and the learning process. California Management Review, 18, 21-31.

Kolb, D. A. (1984). Experiential learning: Experience as the source of learning and development. Englewood Cliffs, NJ: Prentice Hall.

Knechel, W. R. (1989). Using a business simulation game as a substitute for a practice set. Issues in Accounting Education, 4, 411-424.

Knechel, W. R. (1992). Using the case method in accounting instruction. Issues in Accounting Education, 7, 205-217.

Kullberg, D. R., Gladstone, W. L., Scanlon, P. R., Cook, J. M., Graves, R. J., Homer, L. D. O'Malley, S. F. & Kangas, E. A. (1989). Perspectives on education: Capabilities for success in the accounting profession. New York: AICPA.

McKeachie, W. J., Pintrich, P. R., Lin, Y., & Smith, D. A. (1986). Teaching and learning in the college classroom: A review of the research literature. Ann Arbor: University of Michigan.

Millis, B. J. (1991). Fulfilling the promise of the "seven principles" through cooperative learning: An action agenda for the university classroom. Journal on Excellence in College Teaching, 2, 139-144.

Nastasi, B. K., & Clements, D. H. (1991). Research on cooperative learning: Implications for practice. School Psychology Review, 20, 110-131.

Qin, Z., Johnson, D. W., & Johnson, R. T. (1995). Cooperative versus competitive efforts and problem solving. Review of Educational Research, 65, 129-143.

Ravenscroft, S. P., Buckless, F. A., McCombs, G. B., & Zuckerman, G. J. (1995). Incentives in student team learning: An experiment in cooperative group learning. Issues in Accounting Education, 10, 97-109.

Slavin, R. E. (1983). When does cooperative learning increase student achievement? Psychological Bulletin, 94, 429-445.

Sorcinelli, M. D. (1991, Fall). Research findings on the seven principles. New Directions for Teaching and Learning, 47, 13-25.

Svinicki, M. D., & Dixon, N. M. (1987). The Kolb model modified for classroom activities. College Teaching, 35, 141-146.

Tyson, T. N. (1986). Energize your accounting class with a simulation that's fun for students. Journal of Accounting Education, 4, 117-122.

Webb, N. M. (1982). Student interaction and learning in small groups. Review of Educational Research, 52, 421-445.

Wolfe, D. M., & Kolb, D. A.(1979). Career development, personal growth, and experiential learning. In D. A. Kolb, I. M. Rubin, and J. M. McIntyre (Eds.) Organizational psychology: A book of readings (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.

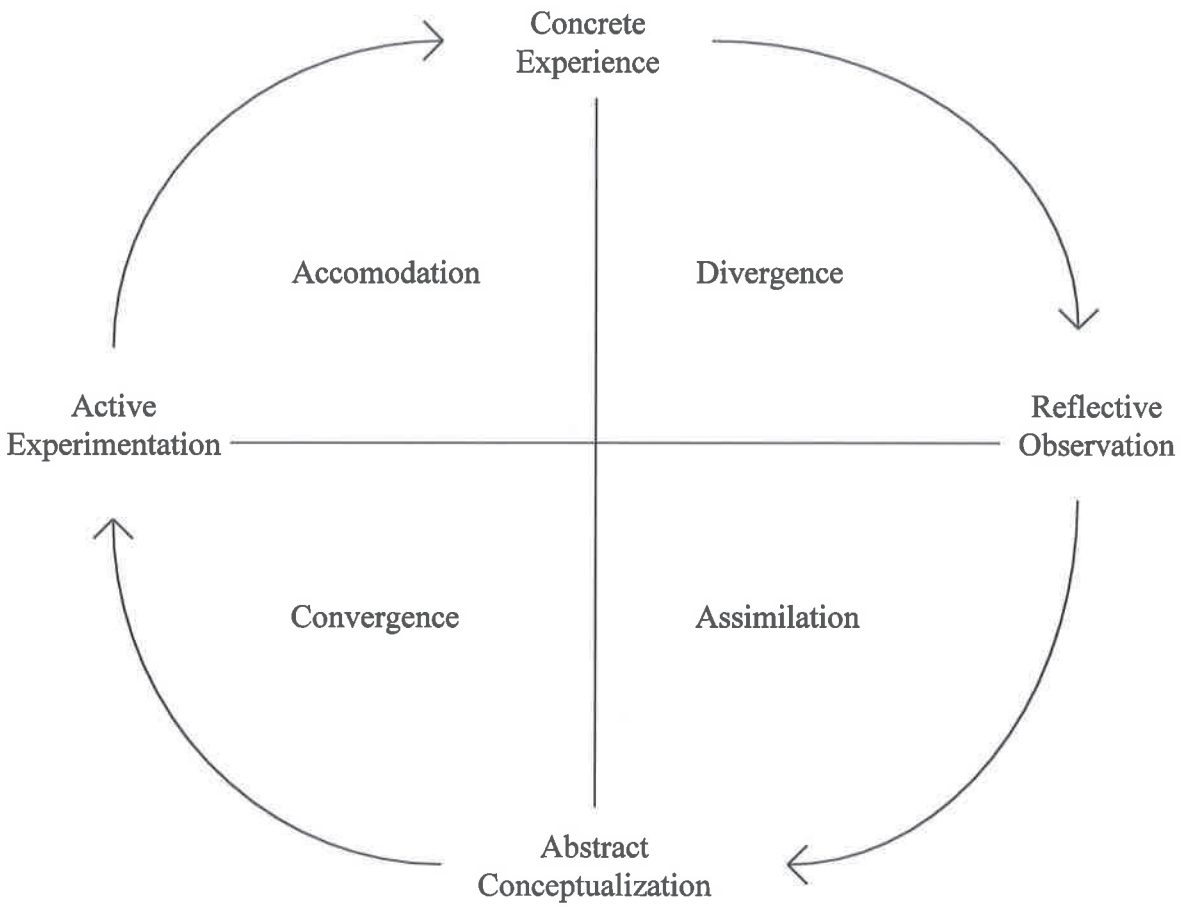

Figure 1. Experiential learning cycle (after Kolb, 1976).